

Inventions & Innovation Emerging Technology

Tribopolymerization as an Anti-Wear Mechanism

Tribopolymerization is an advanced technology that uses molecules called monomers to create perpetually renewing films directly on surfaces that require lubrication, such as ceramic or alloy steel. Unlike the action of surface treatments of coatings, which wear away, these protective polymeric films form continuously in critical areas of boundary lubrication and wear. The films efficiently form in localized areas where the greatest amount of wear occurs, reducing wear and friction, and saving energy in the process.



Contact

*Virginia Polytechnic Institute and State University
609 Watson Lane
Blacksburg, VA 24061-0238*

*Contact: Michael J. Furey
Telephone: 540-231-7193
Email: mfurey@vt.edu*



U.S. Department of Energy
Energy Efficiency and Renewable Energy